# Coordinated by

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## Specifications for fire alarm system

#### Specifications for fire alarm control panel, type 1:

- Fire detection loops (FDL): no less than 10 pcs;
- Light indication: 1 block indicator, 1 indicator for each FDL for indication display, 1 indicator for each relay output;
- Smoke detector power supply: total current consumption of detectors for one FDL up to 1.2 mA;
- Voltage for each FDL input: 19 V  $\div$ 22 V in case of an installed termination resistor, 27  $\pm$  0.5 V in case of an FDL break;
- Built-in sound alarm: included;
- Case tamper switch: included;
- Non-volatile event buffer: min. 512 messages;
- Interface: RS-485;
- Protocol: depending on the manufacturer;
- Power supply: external DC source with a nominal voltage ranging from 12 to 24 V;
- Actuator control outputs (siren, ventilation deactivation): min. 4 pcs;
- Current overload protection: included;
- Operating temperature range: from -30 to +50 °C;
- PC connectivity: included.

#### Specifications for fire alarm control panel, type 2:

- Fire detection loops (FDL): no less than 20 pcs;
- Light indication: 1 block indicator, 1 indicator for each FDL for indication display, 1 indicator for each relay output;
- Smoke detector power supply: total current consumption of detectors for one FDL up to 1.2 mA:
- Voltage for each FDL input: 19 V  $\div$ 22 V in case of an installed termination resistor, 27  $\pm$  0.5 V in case of an FDL break;
- Built-in sound alarm: included:
- Case tamper switch: included:
- Non-volatile event buffer: min. 512 messages;
- Interface: RS-485;
- Protocol: depending on the manufacturer;
- Power supply: external DC source with a nominal voltage ranging from 12 to 24 V;
- Actuator control outputs (siren, ventilation deactivation): min. 5 pcs;
- Current overload protection: included;
- Operating temperature range: from -30 to +50 °C;
- PC connectivity: included.

#### Specifications for fire alarm control panel, type 2:

- Number of radial non-addressable fire detection loops (FDL): min.3;
- Light indication: 1 block indicator, 1 indicator for each FDL for indication display, 1 indicator for each relay output;
- Smoke detector power supply: total current consumption of detectors for one FDL up to 3 mA;
- Voltage for each FDL input: 19 V  $\div$ 22 V in case of an installed termination resistor, 27  $\pm$  0.5 V in case of an FDL break;
- Built-in sound alarm: included;
- Case tamper switch: included;
- Interface: RS-485;
- Protocol: depending on the manufacturer;
- Power supply: Network voltage from 187 to 242 V (50 Hz  $\pm$  5%);
- Controlled outputs: min. 4 pcs;
- Non-controlled outputs: 3 pcs.;
- Current overload protection: included;
- Operating temperature range: from -30 to +50 °C;
- PC connectivity: included.

#### Specifications for central control panel:

- Number of devices and equipment connected to the main line: no more than 127 pcs;
- Interface: RS-485;
- Number of fire detection loops and addressable detectors grouped into sections: no more than 2048:
- Number of automatically controlled relay outputs: no more than 256;
- Number of user passwords: no more than 2047;
- Event log volume: 8000;
- LCD indicator: 2 lines x 16 characters with backlight;
- Power supply: from a redundant DC source;
- Power voltage: from 10.2 to 28.4 V;
- Operating temperature range: from -10 to +55 °C;
- PC connectivity: included.

#### Specifications for gas fire fighting module:

- Operating pressure at a temperature of 20+2 0C: 25.0 ( $\pm$  2.0) bar;
- Rupture disk response pressure:  $50.0 \pm 5.0$  bar;
- Maximum / minimum GFES load in module: HFC 125 19 / 11 kg;
- Duration of GFES charge release: no more than 10 sec.
- Module design mass (with mounting bracket): no more than 11 kg;
- Module exploitation temperature range: from -10 to +50 °C;
- Trigger voltage on pyrotechnic initiator contacts: from 0.9 to 30.0 V;
- Full ignition (response) current of pyrotechnic initiator charge: no less than 0.3 A.